



Environmental Engineers,
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December 15, 2004

Ms. Nancy Lou Sandoval
Remedial Project Manager
Arizona Department of Environmental Quality
1110 West Washington
Phoenix, AZ 85007

Subject: Transmittal of November 2004, Monthly Progress Report
Phoenix-Goodyear Airport (PGA) South Site, Goodyear, Arizona

Dear Ms. Sandoval:

Attached is the monthly progress report for November 2004, for the PGA South Site in Goodyear, Arizona. This report is being submitted on behalf of The Goodyear Tire & Rubber Company (GTRC) to fulfill the reporting requirements outlined in the Consent Decree. Activities conducted this month included:

- continuing operation of the three groundwater treatment systems;
- collecting monthly effluent samples;
- starting up well E-102 (November 3rd);
- collecting samples from E-102;
- meetings with ADEQ and USEPA (November 17 & 18);
- receiving comments from ADWR on the pending permit to Withdrawal Poor Water Quality Groundwater (application submitted August 26th); and
- submitting the annotated outline to ADEQ and USEPA for a proposal to cease groundwater remediation of the Subunit A.

If you have any questions, please feel free to call me at (614) 508-1213.

Sincerely,

SHARP AND ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "T. Struttman", is written over a horizontal line.

Todd Struttman, P.E.
Principal

cc: J. Sussman, Goodyear Tire & Rubber Company
M. Aycock, USEPA
S. Reif, Arizona Department of Water Resources
B. Pedersen, BEM Systems, Inc.
R. Bartholomew, Bartholomew Engineering
D. Stoltzfus, City of Phoenix
C. Parker, City of Phoenix

TO: Nancy Lou Sandoval, Remedial Project Manager
Arizona Department of Environmental Quality (ADEQ)
FROM: Jeff Sussman, Project Manager
The Goodyear Tire & Rubber Company (GTRC)
SUBJECT: November 2004 Monthly Progress Report,
Phoenix-Goodyear Airport (PGA) South Site in Goodyear, Arizona
DATE: December 15, 2004

CURRENT ACTIVITIES

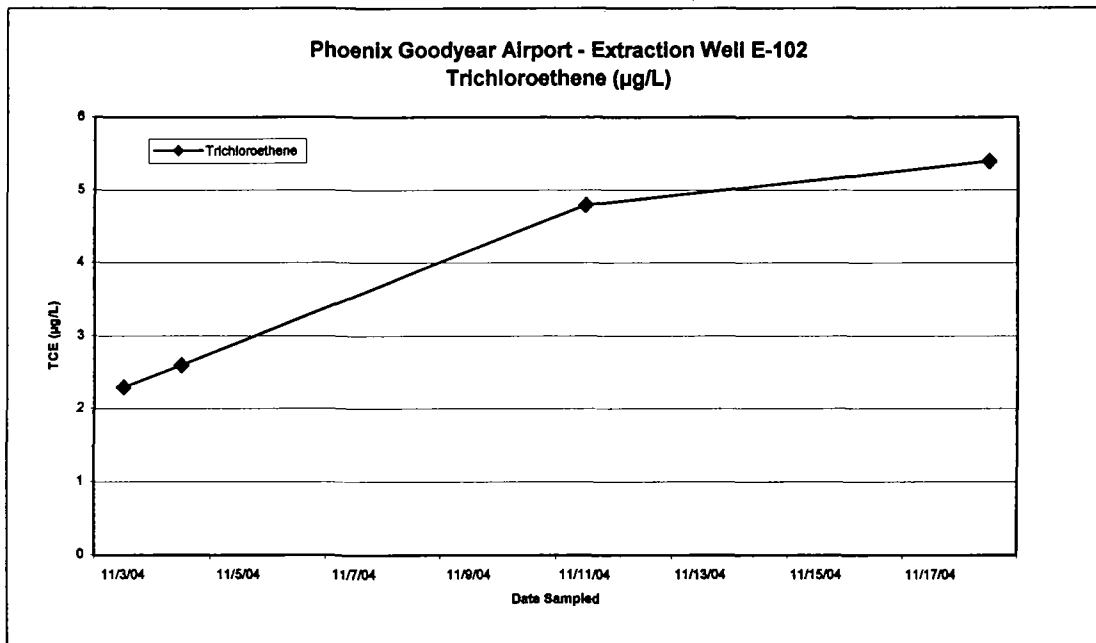
This monthly report describes the PGA site activities conducted during November 2004. Notable activities are described below or detailed in the sections that follow. Activities this month included:

- continuing operation of the three groundwater treatment systems;
- collecting monthly effluent samples;
- starting up well E-102 (November 3rd);
- collecting samples from E-102;
- meetings with ADEQ and USEPA (November 17 & 18);
- receiving comments from ADWR on the pending permit to Withdrawal Poor Water Quality Groundwater (application submitted August 26th); and
- submitting the annotated outline to ADEQ and USEPA for a proposal to cease groundwater remediation of the Subunit A.

Trichloroethene (TCE) was detected in well COG#11 on December 19, 1997. GTRC agreed to continue sampling the well on a monthly basis until the Northern Subunit C delineation is complete and an extraction system in place. This well was sampled on November 17th and TCE was not detected above the laboratory reporting limit (<1.0 µg/L). This well will continue to be sampled on a monthly basis until approval is received from ADEQ.

The construction of the pipeline from extraction well E-102 was completed in October with official startup on November 3, 2004. Well E-102 was started up at an initial rate of 300 gpm. This well is currently being sampled and water level measurements collected as per the approved E-101 Cessation Plan. The results of the initial sampling are listed in the table and presented in the graph below.

Well	Chemical Name	Date Sampled	Result	Units	Time
E-102	Trichloroethene	11/3/04	2.3	µg/L	1 hour
E-102	Trichloroethene	11/4/04	2.6	µg/L	24 hour
E-102	Trichloroethene	11/11/04	4.8	µg/L	8 days
E-102	Trichloroethene	11/18/04	5.4	µg/L	2 weeks
E-102	Trichloroethene	12/2/04	Pending	µg/L	4 weeks



OUTSTANDING ISSUES/RESOLUTIONS

The owner of the property on which the former Goodyear Farms irrigation well (well 9-B) has signed an access agreement and Unidynamics provided a letter granting permission to access the well site through their property. Well abandonment began on October 18, 2004 but was suspended on October 22, 2004 when it became necessary to switch from rotary to cable tool drilling method. The work was resumed on November 8, 2004 and is anticipated to be complete in mid December.

On Monday November 15, 2004, the site operator (Bartholomew Engineering, Inc.) for the PGA South system identified a pipeline leak in one of the raw water pipelines that is part of the Subunit A ground water extraction system. The leak was investigated, pumps shut down, and appropriate authorities notified. SHARP's letter of December 3, 2004 provides details of the leak and actions taken.

PLANS FOR THE NEXT MONTH

Plans for December 2004 include:

- continuing operation of the Subunit A treatment system, the Northern Subunit C treatment system, and the Southern Subunit C treatment system;
- providing a summary report of the startup including hydraulic analysis, capture evaluation, and chemical data associated with the startup of E-102 (target December 10th);
- receiving comments from ADWR on the pending permit to Withdrawal Poor Water Quality Groundwater (application submitted August 26th);
- ceasing production from E-101 following 30 days of continuous operation of E-102;
- beginning monitoring program for well E-102, E-101 and GAC#2 as prescribed in the approved cessation plan;

- conducting a carbon changeout of the primary carbon at the Southern Subunit C system;
- registering the offsite piping with Arizona Blue stake; and
- completing as-builts and providing them to USEPA and ADEQ for their records.

CHROMIUM MANAGEMENT APPROACH

As part of the chromium management approach, well E-17 was placed on-line without chrome treatment on June 18, 2001. Key wells are sampled monthly and the balance quarterly. The analytical results for the last six months are presented in the table below.

Extraction Well	6/21/04 CRT* (mg/L)	7/23/04 CRT* (mg/L)	8/17/04 CRT* (mg/L)	9/17/04 CRT* (mg/L)	10/14/04 CRT* (mg/L)	11/11/04 CRT* (mg/L)
NE-1	NS	NA	NA	0.076	0.094	NA
NE-2	NS	NA	NA	0.037	0.063	NA
NE-3	NS	0.010	NA	NA	0.030	NA
NE-4	NS	0.014	NA	NA	0.053	NA
NE-5	NS	0.015	0.076	0.087	0.10	0.094
E-07R	NS	NA	NS	NA	0.34	NA
E-08	NS	NA	NS	0.050	NS	NA
E-11	NS	0.045	NA	NS	0.047	NA
E-12	NS	NS	NS	NS	NS	0.20
E-16	NS	NA	NS	NA	NA	NA
E-17	NS	NS	0.143	0.157	0.19	0.17
Air stripper Effluent predicted (a)	NS	NA*	0.035	0.050	0.065	0.088
Air stripper Effluent actual	NS	0.023	0.050	0.069	0.083	0.073

*CRT – total chromium results by method EPA 200.7. All the samples were digested prior to analysis as required by the method.

NS – not sampled due to operation issues.

NA – not analyzed as per sampling program.

NA* - flows for the previous month were not available to calculate predicted chrome as the system was off-line.

(a)– the predicted effluent concentration is based on a mass weighted average from the individual extraction wells.

NORTHERN SUBUNIT C TREATMENT SYSTEM OPERATION

Operation of the Northern Subunit C system continued during November 2004. A total of 7.3 million gallons (MG) of water was extracted. The Northern Subunit C system operated for the entire month.

The treatment system influent sample contained TCE at a concentration of 3.0 µg/L (11/11/04) yielding a calculated mass removal this month of 0.18 lbs. Total mass removed to date by the

system is 24.15 lbs. TCE was detected in the sample collected between the carbon vessels at 1.8 µg/L.

Production for November 2004 was as follows:

Wells Injection Wells	Production (MG)	Average Rate (gpm)	Days On/Uptime Rate (days/gpm)
I-101	*	*	*
I-102	*	*	*
Total Injected	*	*	*
Extraction wells			
E-101	3.0	69.4	30/69.4
GAC#2 **	4.3	72.8	41/72.8
Total Extracted	7.3		

* Injection well flow meters not operating correctly and are reporting erroneous data.

** Total flow based on data as reported by Lockheed Martin reported on 11/2/04 – 12/13/04 for well GAC#2.

SOUTHERN SUBUNIT C TREATMENT SYSTEM OPERATION

A total of 21.2 MG of water was extracted from the Southern Subunit C treatment system during November 2004. The system operated 29.25 out of a possible 30 days. The November inlet sample contained TCE at 4.0 µg/L (11/11/04) yielding a calculated mass removal for TCE during November of 0.71 lbs. Total mass removed to date by the Southern Subunit C system is 165.00 lbs. The TCE result was 1.7 µg/L in the sample collected between the carbon vessels prior to change out of the carbon. A carbon changeout was conducted on December 7, 2004.

The Southern Subunit C system was offline for 0.75 days for programming changes and other work associated with the startup of extraction well E-102. Extraction well E-202 was offline for 29 hrs during startup of E-102 for flow balancing of the injection and extraction wells.

Extraction well E-102 was placed on line on November 3rd, 2004.

Vessel Flow Configuration*	Operational Dates	Time to Detect TCE >5 µg/l**	Time Before Required Change out
A/B	Startup (10/94) – 6/95	6 months	8 months
A'/B	6/95 – 12/95	3 months	6 months
A''/B	12/95 – 10/96	8 months	10 months
B/A''	10/96-1/22/97	1 month	3 months
A''/B'	1/22/97-10/30/97	9 months	10 months
B'/A'''	10/31/97 – 6/22/98	7 months	8 months
A'''/B''	6/22/98 – 8/25/99	12 months	14 months
B'''/A'''	8/25/99 – 10/4/00	13 months	13 months
A''''/B'''	10/4/00- 10/17/01	12 months	12 months

Vessel Flow Configuration*	Operational Dates	Time to Detect TCE >5 µg/l**	Time Before Required Change out
B'''/A'''	10/17/01- 1/16/03	14 months	14 months
A'''/B'''	1/16/03 – 12/7/04	> 23 months	21
	Changeout scheduled 12/7/04		

* Vessel contents

A - virgin coal based carbon

B - virgin coal based carbon

A' - on site regenerated coal based carbon

A''- coconut based carbon (applies to A''', A''', A''')

B' - coconut based carbon (applies to B'', B'', B'', and B''')

** The detection limit is 1 µg/L; the action level is 5 µg/L detected between the vessels; detection at this level initiates the planning process for the next change out. Time is presented in months after change out

Production for the Southern Subunit C system in November 2004 is as follows:

Extraction Wells	Production (MG)	Average Rate (gpm)	Days On/Avg. Rate (days/gpm)
E-201	7.5	173.6	29.25/178.1
E-202	1.8	41.7	28.5/43.9
E-102	11.9	275.5	27/306.1
Totals	21.2	490.7	29.25503.3
Injection Wells	Production (MG)	Average Rate (gpm)	Days On/Avg. Rate (days/gpm)
I-201	8.5	196.8	29.25/201.8
I-202	2.5	57.9	29.25/59.4
I-203	7.6	175.9	29.25/180.4
Totals	18.6	430.6	29.25/441.6

SUBUNIT A TREATMENT SYSTEM OPERATION

A total of 14.6 MG of water was treated at the Subunit A system in November 2004. The Subunit A extraction system operated at an average uptime rate of 339 gpm for 30 of 30 days this month. The treatment system influent sample contained TCE at a concentration of 64.0 µg/L (11/11/04) yielding a calculated mass removal of 7.8 lbs for the month of November. Total mass removed by the system to date is 4847.19. The TCE result in the effluent sample taken from the air stripper tower at the Subunit A Treatment System was <1.0 µg/L.

The Subunit A system operated for the entire month.

Production for the Subunit A system in November 2004 is as follows:

Extraction Wells	Production (MG)	Average Rate (gpm)	On time Days/Rate (gpm)
Total Extracted	14.6	339.0	30/339.0
Total Injected	14.0	324.1	30/324.1

The differences between total extracted and total injection is due to evaporation across the air stripper and meter variances.

Performance Measurement Tracking Log**PERIOD COVERED: November 2004****Project Manager Input Form****DATE DUE: December 15, 2004****ADMINISTRATIVE INFORMATION:**

1. Main Site Code: **41-0000-02**
2. Site Name **Phoenix Goodyear Airport (south)**
3. Project Manager: **Nancy Lou Sandoval**
4. Funding Type: **CERCLA- consent decree required**

Technical Information

- | | | | |
|---|---|--|----------|
| 5. DEQ Site Visits (RPM & Hydro) | 0 | 6. Meetings w/Ips | 0 |
| 7. Public Meetings Held | 0 | 8. Fact Sheets on a site | |
| 9. Water Samples Taken (DEQ/EPA) | 3 | 10. Water Samples Taken (IP) | |
| | 0 | | |
| 11. Soil/Soil Gas Samples Taken (DEQ/EPA) | | 12. Soil/Soil Gas Samples Taken (IP) | 0 |
| 13. Air Samples Taken (DEQ/EPA) | 0 | 14. Air Sample Taken (IP) | 0 |
| 15. Groundwater Wells Installed (DEQ) | | 16. Groundwater Wells Installed (IP) | 0 |
| Date Installed ____/____/____ | | | |
| 17. Soil Vapor Wells Installed (DEQ) | 0 | 18. Soil Vapor Wells Installed (IP) | 0 |
| Date Installed ____/____/____ | | Date Installed ____/____/____ | |
| 19. Abandoned Groundwater Wells | 0 | 20. Abandoned Other Wells | 0 |
| Date Abandoned ____/____/____ | | Date Abandoned ____/____/____ | |
| 21. Remedial Investigation (started) overall area and/or facilities (see comments). | 0 | 22. Remedial Investigations (completed) | 0 |
| 23. Date Risk Assessment Completed | 0 | 24. Date Feasibility Study Underway | 0 |
| | | ____/____/____ | |
| 25. Date Feasibility Study Went Underway | 0 | 26. Remedial Design 10% 30% 60% 100% | |
| 27. Construction Start Date ____/____/____ | 0 | 28. Technology Used: pump and treat for water (air stripper Subunit A/GAC for Subunit C), SVE for Soil | |
| | | 30. Date Remedial Action Completed | |
| 29. Treatment Plant Start Date 12/89 Subunit A; 2/94 North Subunit C; 10/94 South Subunit C | | ____/____/____ | |
| 31. Gallons Water Treated (VOCs) | | 32. Hazardous Substance Removed (VOCs) in GW Treatment | 8.69 |
| Subunit A | | | |
| 14,600,000 | | | |
| Southern Subunit C | | | |
| 21,200,000 | | | |
| Northern Subunit C | | | |
| 7,300,000 | | | |
| 33. Gallons Water Treated (metals) | 0 | 34. Hazardous Substance Removed (metals) | 0 |
| 35. Gallons Water Treated (other) | 0 | 36. Hazardous Substance Removed (other) | 0 lbs |
| 37. Tons Soil Treated On-Site | 0 | 38. Tons Soil Taken Off-site | 0 (tons) |
| 0 (tons) 1 cy = 1 ton | | | |
| 39. Acres Remediated | | 40. End Use of Water - (reinjection) | |
| 41. Estimated reject Completion Date | | 42. Actual Completion Date ____/____/____ | |